1: Jochelson E-5 (1900-01) 1908 RY4 Koryak RY4

dwell on their description. Among the wealthy Koryak, imported earthenware or enamelled iron plates may be found.

Fig. 106 represents a small wooden bucket with a lid, for picking berries. It is hollowed out in the same way as the large water-buckets, but it is furnished with two alder hoops, a lid, and a carrying-strap.

The chamber-vessel (Fig. 107) is an indispensable part of the household goods. The Koryak do not go out of doors at night to void urine, while children even go to stool indoors. The chamber-vessel is hollowed out of an aspen or poplar tree. It is usually made with the brim bent inward to

Fig. 105, *a* ($\frac{1}{11}$), Spoon made of Horn of Mountain-Sheep (Length, 20 cm.); *b* ($\frac{1}{11}$), Bone Teaspoon (length, 15 cm.).

Fig. 106 ($\frac{1}{11}$). Wooden Bucket Height, 26 cm.

prevent the contents from spilling when the vessel is carried up the ladder of the underground house. The Reindeer Koryak keep it in the corner of the inner sleeping-tent, and its shape prevents its being upset by sleepers. If the vessel is full, the mistress raises the edge of the front side of the tent and pours the contents out into the outer tent. In the morning the women carry it out of doors and pour the urine on the snow, which then attracts the reindeer.[1] Instead of

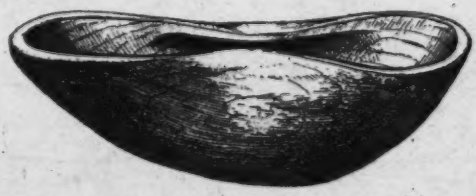

Fig. 107 ($\frac{1}{11}$). Chamber-Vessel. Length 59 cm.

[1] See p. 483.

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Mollusks are gathered on the seashore and eaten by both the Maritime and the Reindeer Koryak, but are not considered a particularly delicate food. They are gathered mainly when there is not enough fish and other sea-food. Evidently mollusks were formerly eaten to a much greater extent. In excavating ancient underground houses of the Maritime Koryak at the mouth of the river Nayakhan, on a rocky coast rising about sixty metres above the sea, I found piles of shells of the following species:[1] *Purpura saxicola*, *Mytilus edulis*, *Mya arenaria*, and *Littorina grandis*. The same species are in use at present. Fig. 110 shows a pick made of bone of whale, with which to pick mollusks out of the shell. It is called kɪ|kā'-kuna (from kɪ|kāk, the Koryak name for *Littorina grandis*).

Fig. 110 ($\frac{1}{1\frac{1}{3}}$). Bone Pick for extracting Shell-Fish from Shells. Length, 10 cm.

The Reindeer Koryak eat the larva of the reindeer-fly (*Œstrus tarandi* Nordenskiöld, or *Tabanus tarandinus* Slunin), which develops under the skin of the reindeer. In spring, when the larvæ creep out from beneath the skin and settle on the hair, the Koryak gather and eat them. Herdsmen gather larvæ in their caps and bring them home as a treat for the children.

Vegetable Food. — Vegetable food plays a lesser rôle among the Koryak than among the Kamchadal, but a greater one than among the Chukchee. We have already learned from the myths that the ancestor of the Koryak, Big-Raven, was fond of berries, edible roots and herbs, and pudding prepared from them.

Koryak women gather edible roots from the burrows of red-backed mice, of which two species (*Evotomys latastei* and *Ev. Wosnessenskii*) are found in the Gishiga region and in the northern part of Kamchatka. In autumn, when the mice have laid in their winter supplies of roots, their burrows are dug up by means of picks, specimens of which are represented in Fig. 111; *a* representing an ancient form of root-digger, with a bone point tied to a wooden bow-shaped handle; while *b* shows the recent type, with an iron point, but preserving its former shape and the manner of attaching the point to the handle.

In locating the burrows of mice, aid is given by dogs which the women take along. The mice are in the habit of cleaning the roots of adhering particles of soil, and of placing them in rows in underground passages. It is deemed a sin to take away all the stores of a mouse. A small part of the supplies should be left. Besides, the burrows are not dug up late in the fall, that the mice may have ample opportunity to replenish their ravaged storerooms. I also found a belief current among the Koryak, widespread among other tribes of northeastern Siberia, that, on finding their storerooms emptied, the mice resort to suicide by hanging themselves in the crotches of branches.

[1] Identified by Dr. Louis P. Gratacap.

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000 137 222 212 the mice resort to suicide by hanging themselves in the crotches of branches. The following roots are dug out of mice-holes: bulbs of martagon (*Fritillaria sarana*); *Claytonia acutifolia* Wild, called "sweet-root" by the Russians, ŕnat by the Koryak; roots of wild sorrel (*Polygonum polymorphum*); the root called me'tčin by the Koryak and "bitter-root" by the Russians; and the roots of sedge grass (called pa'lxo by the Koryak). All these roots are eaten both raw and cooked. When eaten raw, they are dipped in seal-oil or pounded with roe. They are cooked with fish and reindeer-meat, either in the form of a porridge made of roots ground together with fish, or by cooking roots in seal or reindeer blood.

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222 137 252 262 [264]

[251]

[272]

Fig. 111. *a* ($\frac{2}{11177}$), *b* ($\frac{2}{11187}$). Picks for gathering Roots. Greatest length, 56 cm., 37 cm.

Willow-herb (*Epilobium angustifolium*; Koryak, mɛ'nmet occupies the first place among edible herbs. The stems of willow-herb are dried in bunches in the sun or over the hearth, and are chopped with stone hatchets (see Fig. 103). Pieces of seal-blubber or reindeer-fat are dipped into the powder thus obtained, and are thus eaten. The flour is also made into a pudding by grinding the crushed herb with berries and melted seal-oil. In Kamchatka the pith is taken from the split stems, dried in the sun, and stored away for winter use. The fresh leaves of willow-herb are used instead of tea, when the latter is lacking. In northern Kamchatka the Koryak use for food the stem of the sweet *Heracleum spandilium*.

Berries as well as roots are used fresh, raw, or cooked in porridge made of blood, or of cooked fish or meat. Berries also form an ingredient in puddings made of ground fish-roe, fat, and pounded fish. A favorite dish is furnished by the pounded flesh of sun-dried dog-salmon mixed with seal-oil and bleaberries. This mixture is pounded in wooden trays or dishes with wooden or bone pestles. A bone pestle is represented in Fig. 112. The following is a list of the principal berries used: *Empetrum nigrum*, *Vaccinium uliginosum*,

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Vaccinium Vitis idæa, *Rubus chamæmorus*, and also *Lonicera cærulea* and *Prunus padus* (in northern Kamchatka). Bleaberries (*Vaccinium uliginosum*) are considered the best. In Kamchatka the fruit of *Prunus padus* is crushed, and dried in the sun in the form of flat cakes.

Puddings made of crushed berries, roe, fish and seal oil, are frozen and then eaten, pieces being chopped off with a knife. These puddings are considered a treat for visitors, and excellent travelling-provisions.

Fig. 112 (1/12). Bone Pestle. Length, 23 cm.

Berries are picked in summer and autumn. The Reindeer Koryak have more opportunity than the Maritime Koryak to pick the cloudberry (*Rubus chamæmorus*), which grows in the tundra; but they do not store it, and they eat it right after picking.

Other food-plants are the fruit of the wild rose (*Rosa alpina* Pall.), the mountain ash, sea-colewort, cedarnuts, and willow-bark. Sea-colewort (*Alaria esculanta;* Koryak, me'čgomei) is eaten not only by the Maritime Koryak, but also by the Reindeer Koryak when hunting on the seacoast in summer. It is cut with a knife, and cooked with seal or reindeer blood, or also with reindeer-meat. Cedar-nuts are gathered late in autumn, extracted from their cones, and preserved in small skin bags. It is interesting to note that the Koryak eat the nuts with their shells on. The inner portion of willow-bark is also consumed. It is stripped off the trees, crushed with a stone hammer, and cooked with fish. It is also chewed raw.

To the vegetable foods used by the Reindeer Koryak must also be added the contents of the reindeer's first stomach, which consists of reindeer-moss not completely digested. This greenish mass is cooked with reindeer-blood. This food, however, is now beginning to drop out of use. Wealthy reindeer-breeders usually throw away the contents of the reindeer stomach; but when other food is lacking, the herdsmen eat them.

The winter supplies of berries, roots, and other edible plants, are not large, and do not figure as an essential or constant ingredient of nourishment. Towards the middle of winter, hardly any supplies of vegetable food are left; and towards spring, when animal food is about to give out, all the vegetable food has been consumed.

Flour and rice are sold by Russian dealers. These products may also be found at the government depot in Gishiga, where they are sold to the natives at cost price.

The Koryak are very fond of these imported vegetable products, particularly of rice, of which gruel is cooked and eaten with seal-oil or reindeer-fat. They like wheat flour, but not rye flour. It is mixed with water or blood, and

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with large nets sewn together from the smaller ones they owned individually.

Other methods of fishing included fishing with the aid of an iron hook (marik) and "dipper" nets. The fisherman stood up to his knees in water, holding in his hands an implement that looked like a large sack-net on a long pole. Sighting a fish, he quickly directed the net towards it, scooping it up and throwing it out on the gravel shore. This method was used in the beginning of the fish-run, before the cooperative set to work.

Most of the catch went into the making of yukola. The fish were disemboweled and hung to dry on special racks. The yukola (fish dried in the sun and the wind) was put away in storehouses—tents on high piles, covered with dry grass. Yukola was usually made by women, while fishing was done chiefly by men. The yukola was the principal food of the people all year; it was also used as feed for the dogs, in addition to "pickled fish"—freshly caught fish piled into a pit, covered with earth, and left to ferment until needed.

An important auxiliary occupation among both sedentary and nomad Koryaks was hunting, which was done solely by men. The fur animals hunted were fox, wolverine, otter, hare and ermine.

Fur-animal hunting was most important among the Palantsy, who lived in a region abounding in Kamchatka sable. These were trapped in nets. Other animals were hunted with guns. Foxes and smaller animals—yevrazhka hamster and ermine—were caught in springtraps. The latter two were usually hunted by adolescent boys. Hares and partridges were caught with a noose. In early spring, many hunters took meat animals—bears, Siberian marmot, wild reindeer and mountain sheep. Tundra animals were usually hunted without the aid of hunting dogs, which were owned by relatively few hunters.

An important role in Koryak economy was taken by the gathering of wild plants. The gathering of edible roots, grasses and berries was women's work. Roots were obtained chiefly from mouse-nests. Searching out a mouse-nest, the woman dug it up with a special wooden hoe and took from it the store of edible roots prepared by the mice. The berries gathered were blueberry, cloudberry and crowberry.

Grass was used to make inner lining for boots, and was also woven into mats, baskets, bags and purses. The weaving of variously shaped baskets, from those in the shape of bowls and trays down to small oval boxes with lids, and also bags of various shapes and sizes was especially developed among the Karagin and Alyutor women.

The men widely engaged in carving bone and the horns of wild sheep.

One of the villages of the northern coastal Koryaks—the village of Paren' on Taygonos Peninsula, was long known for blacksmithery. The Paren' blacksmiths reforged accidentally gotten pieces of iron into knives famed throughout the Koryak territory and beyond it. Even in the early years of the current century, the local Koryak population preferred them to imported Russian and American knives.

Housing

The dwelling of the reindeer-breeding Koryaks (yaranga) was a tent, similar to the Chukchi yaranga (called yayan'a in the Chavchuven dialect, and raran'a in the Alyutor dialect). Cylindrical at the base and conical at the top, it had a framework of poles and was covered with reindeer skins, with the fur outside. The pelts to be used for covering the yaranga were scraped a little; some of the flesh side was peeled off, then it was kneaded and smoked to make it waterproof. For summer dwellings, the hair was removed, or else worn, old coverings were used.